A collage of images from Argonne National Laboratory. On the left, a large vertical sign for 'ARGONNE NATIONAL LABORATORY' features a large gold 'A'. Below it, smaller text reads 'United States Department of Energy' and 'The University of Chicago'. An arrow points to the right with the word 'ENTRANCE'. To the right of the sign, several scientists in lab coats and safety glasses are working on complex machinery in a laboratory setting.

# Project # 96

## BPLD BPM Digitizer/ Dump History SR Diagnostics Upgrade

*Om Singh  
Diagnostics Group  
APS Operations Division*

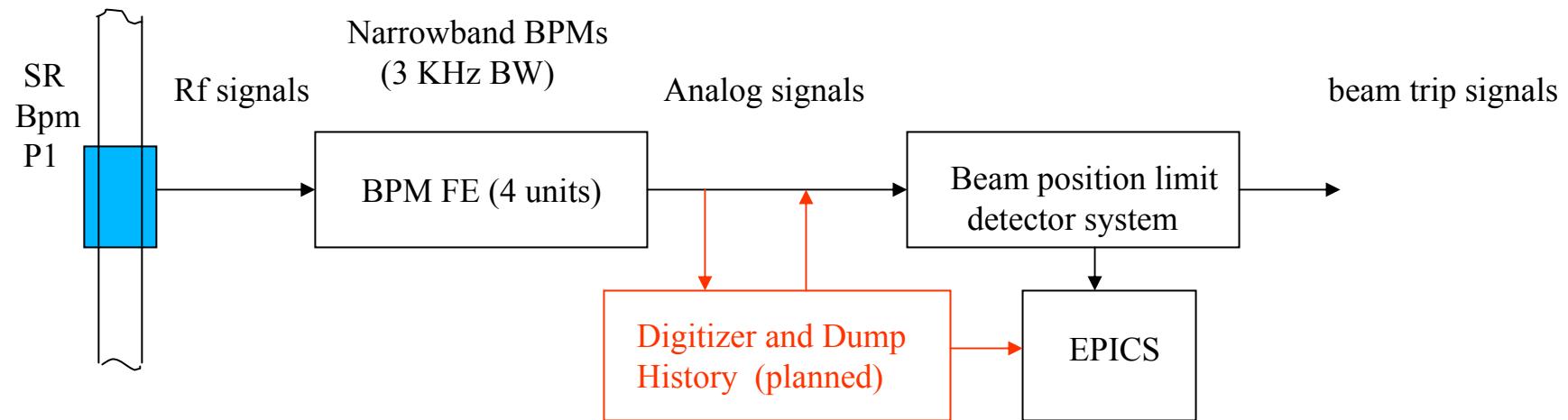
**Argonne National Laboratory**



*A U.S. Department of Energy  
Office of Science Laboratory  
Operated by The University of Chicago*



- **Objective:**
  - Provide fast digitizer and dump history for BPLD beam position monitors to expedite diagnosis of beam dumps resulting from
    - \* *mis-steered beam*
    - \* *faulty bpm hardware*
- **Background Information:**
  - New initiative
  - One year project
  - High priority
- **Benefit to APS:**
  - Reduce down time by expediting repairs
- **Cost:**
  - Fy05 requested funds: \$75K
  - Cost to complete including efforts: \$363K



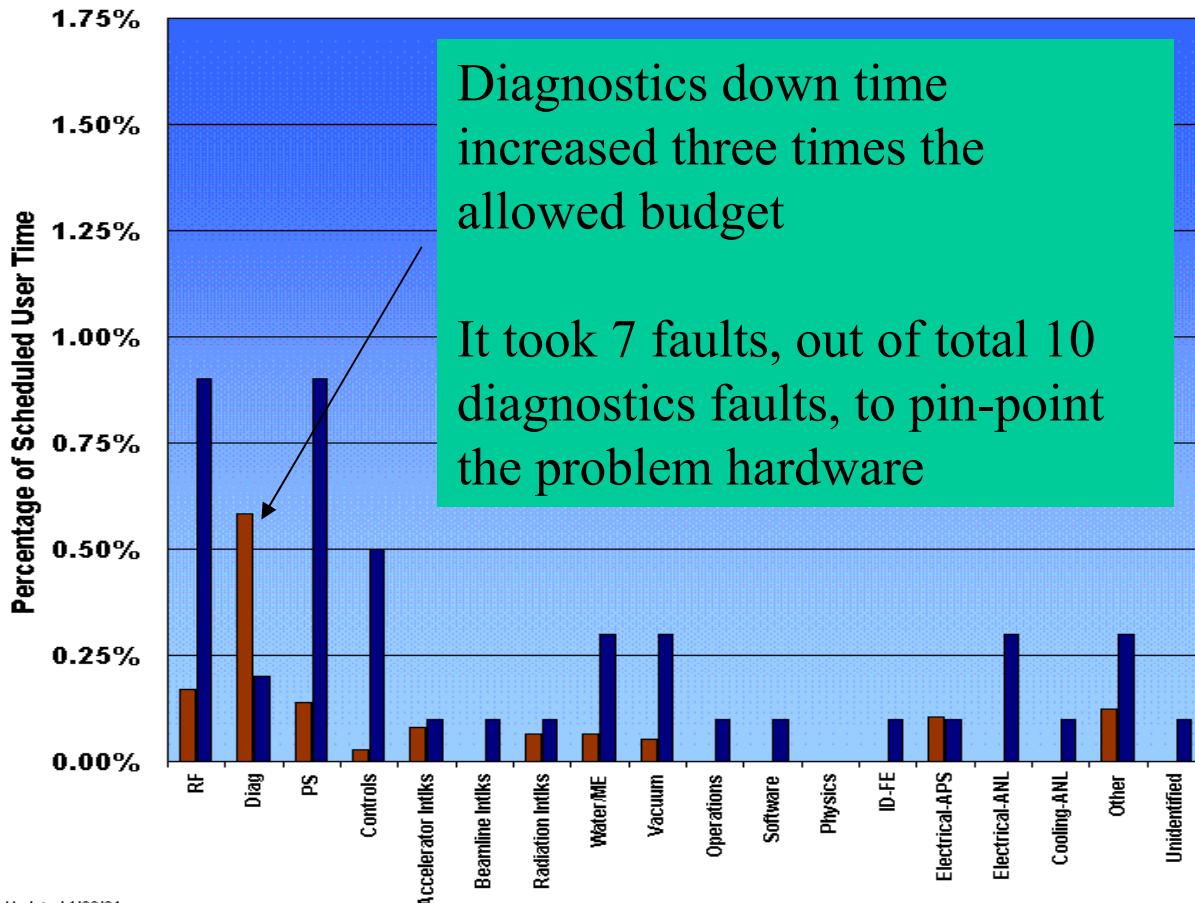
- Beam position limit detector system is exposed to hardware faults all the way down to the rf buttons
- Fast digitizer and dump history will provide needed diagnostics to expedite hardware repairs

# Run 2004-1 Downtime vs Downtime Budget

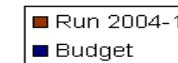
## Run 2004-1 Downtime by System January 29 through April 20, 2004

Scheduled User Time = 1647 hours

User Downtime = 36.93 hours



Updated 4/26/04



Downtime Budget

Category	Percentage
RF	0.90%
Diagnostics	0.20%
PS	0.90%
Controls	0.50%
Accelerator Inflks	0.10%
Beamline Inflks	0.10%
Radiation Inflks	0.10%
Water/ME	0.30%
Vacuum	0.30%
Operations	0.10%
Software	0.10%
Physics	0.00%
ID-FE	0.10%
Electrical - APS	0.10%
Electrical - ANL	0.30%
Cooling - ANL	0.10%
Other	0.30%
Unidentified	0.10%
Total	4.6%

BPLD bpm fast digitizers are critical to maintain high beam availability.

